



February 15, 2021

Montgomery County Climate Action Plan  
Montgomery County,  
Maryland Government  
101 Monroe Street  
Rockville, MD 20850  
[climate@montgomerycountymd.gov](mailto:climate@montgomerycountymd.gov)

Dear Sir or Madam:

On behalf of Bradford White Corporation (BWC), thank you for providing an opportunity to comment on the Montgomery County Climate Action Plan (CAP). We are pleased to be a part of this important conversation.

BWC is an American-owned, full-line manufacturer of residential, commercial, and industrial products for water heating, space heating, combination heating, and water storage products.

We are very interested in Montgomery County's efforts to help transition towards cleaner energy and reduce greenhouse gas (GHG) emissions. As a manufacturer, we support legislative and regulatory efforts that promote a healthy environment and robust economic growth, while saving energy and ensuring a high quality of life for consumers. We are continuously working to review and design new higher efficiency equipment that improves consumer comfort, without compromising consumer choice, product quality, or safety.

BWC manufactures products, such as electric-fired water heaters, gas-fired water heaters and boilers, and heat pump water heaters (HPWH) that will help Montgomery County's goal of reducing GHG emissions. As a manufacturer, we believe there are critical considerations that must be made when assessing electrification and building decarbonization policies. Any recommended policy should account for the unique climate and consumer needs of individual equipment installations rather than a "one size fits all" approach. BWC hopes to be a resource and partner in Montgomery County's efforts in these areas.

We strongly recommend Montgomery County conduct further research on the water heater market to better understand the distribution of fuels used. Based on data presented during the

**Built to be the Best™**

725 Talamore Drive • Ambler, PA 19002-1873 • 215-641-9400 • [www.bradfordwhitecorporation.com](http://www.bradfordwhitecorporation.com)



State of Maryland’s Building Ad Hoc Committee meetings and data developed during Department of Energy rulemakings, 73-percent of homes in Maryland currently use gas, propane, or oil fuel appliances. And, only 20-percent of those with gas fuel appliances will experience a net savings when switching to heat pump equipment. **Over 50-percent of Maryland households will have a negative cost impact when switching fuel technologies.**<sup>1</sup>

Beneficial electrification programs should consider the costs of retrofitting existing homes and buildings (e.g. electrical service panels and ducting) and prioritize whole-home and wholebuilding solutions to ensure any policy results in reduced GHG emissions. By considering wholebuilding solutions, opportunities to save energy, such as investing in the building envelope in order to save on the HVAC system become apparent. Montgomery County should continue the use of dual fuel sources for all buildings, as high-efficiency gas-fired water heaters can help lower building emissions and manage peak electric loads. In most installations, HPWHs are commonly a two-trade installation. An electrician is required for the electrical connections if any modifications or panel upgrades are required, and a plumber handles the water connections. Any transition to HPWHs should be incentivized and include the cost of an electric service panel upgrade. Every retrofit is a custom job, involving significant time, complexity, and cost. These overall costs must be considered for homeowners, building owners, landlords, and renters. Ultimately, these costs must not be burdensome nor prohibitive, and the results must benefit all.

Being overly prescriptive in all-electric and decarbonization policies discourages or disallows improvements in next generation technologies that might benefit from further innovation. HPWHs, especially commercial HPWHs, are a relatively new technology. In this emerging market, the current knowledge and understanding of HPWHs are based on a very limited number of water heater manufacturers and field test demonstrations.

Marketing programs, consumer education, and incentives will be necessary to increase the market adoption of HPWHs. Distributors are reluctant to stock products until the market is developed. The lack of experienced tradespeople for both the installation and repair of HPWHs requires additional workforce training. If homes and buildings are forced to build all-electric, this discourages and disallows improvements in known and unknown technologies. One example is decarbonized gas technologies, such as renewable natural gas or hydrogen. Montgomery County homes and buildings built to an all-electric standard would require costly retrofits for the gas piping infrastructure to transport these decarbonized gas technologies. Homes and buildings built with dual fuel sources benefit from improvements in future gas-fired and electric-fired technology.

As decarbonization policies become more pervasive, load increases on the grid may limit energy reliability and availability in Montgomery County, as we’ve seen other parts of the country experience. With all-electric construction requirements, the peak load in winter will be greater than the peak load currently seen in summer. If reliable energy is not available in the winter

---

<sup>1</sup> See Jack Mayernik, “Cost Effectiveness of Electrification with Air-Source Heat Pumps”, 8/20/2020, National Renewable Energy Laboratory

**Built to be the Best™**

725 Talamore Drive • Ambler, PA 19002-1873 • 215-641-9400 • [www.bradfordwhitecorporation.com](http://www.bradfordwhitecorporation.com)



months, residents of Montgomery County cannot go without heat. If we electrify end loads without upgrading and modernizing the grid, this will make the job of decarbonizing the grid more difficult, and ultimately more expensive. Unintended consequences from energy reliability can lead to increased community air pollution from diesel generator use for emergency power.

---

It is important for Montgomery County to understand the scope of its installed base of heating equipment and ensure that fuel switching is cost effective, feasible on the electric grid, and maintains consumer choice. Significant energy and environmental benefits can be obtained by incentivizing consumers to replace existing equipment, regardless of fuel type. An incentive program that promotes equipment replacement would likely provide as much, if not more, benefit as a fuel-switching incentive program, while reducing consumer costs and electrical grid burden.

BWC recognizes Montgomery County's desire to cut GHG emissions 80% by 2027 and 100% by 2035, compared to 2005 levels. These goals accelerate and exceed an initial goal of reducing GHG emissions 80% by 2050. As stated in Montgomery County CAP:

*"The three electric utilities (Pepco, BGE, and Potomac Edison) that serve the County could support the County's pursuit of 100% renewable energy supply by providing 100% renewable energy to the grid. **However, this is not currently planned** under the state's Renewable Portfolio Standard (RPS), which mandates that the electricity supply be 50% renewable by 2030. If the utilities do not provide 100% renewable energy to the grid, a potential option for the County, **assuming change in state law to allow it**, would be to establish an opt-out Community Choice Energy (CCE) program and purchase renewable energy for its residents."*

BWC strongly urges Montgomery County not to rely on emissions and cost savings predicated upon a market that cannot be achieved. The aggressive electrification of residential end-use appliances has the potential to exacerbate daily peak electricity demand, increase total household expenditures on energy, and, in the absence of a fully decarbonized electrical grid, likely result in only limited greenhouse gas emissions abatement benefits.

Raising the price of electricity during peak hours will unevenly impact different customer classes due to differences in the ability to either reduce the volume of their energy consumption or shift its occurrence in time. Moreover, it is likely that low-income residents of disadvantaged communities, who have the least flexible work schedules, the least access to high efficiency appliances and energy management systems, and inhabit the most poorly insulated housing stock, will be most adversely affected by these changes.

Utility burden is not evenly shared across society. Low-income communities face utility burdens that far exceed national averages. These families become vulnerable to utility shut offs and evictions. They turn to short term loan products with high interest rates that make repayment difficult, and increasingly contribute to chronic poverty in the United States.<sup>2</sup>

---

<sup>2</sup> See Marilyn A Brown et al, "High energy burden and low-income energy affordability: conclusions from a literature review", 04/03/2020, 202 Prog. Energy 2

**Built to be the Best™**

725 Talamore Drive • Ambler, PA 19002-1873 • 215-641-9400 • [www.bradfordwhitecorporation.com](http://www.bradfordwhitecorporation.com)



Montgomery County has started conversations with underrepresented communities that will continue through action development and implementation. Crucial next steps will be to establish measurable targets; ensure that programs address or do not exacerbate the housing shortage; and create a stable, long-term public fund to support and subsidize advanced efficiency measures, prior to the adoption of electrification and decarbonization policies.

---

BWC recommends Montgomery County review its current water heater market, taking into account potential drawbacks for building retrofits; upfront consumer costs; peak electric loads; and the impact on workforce reductions and workforce retraining.

We recommend Montgomery County follow a technology agnostic approach and push manufacturers to compete in the open marketplace. All appliances providing significant energy and environmental benefits should be evaluated, regardless of fuel type. Montgomery County must take into account consumer choice and affordability in terms of both upfront and operating costs.

BWC recommends that Montgomery County perform a holistic cost-benefit analysis of any allelectric and decarbonization policy to ensure that any recommendations are equitable to all its residents. Quantifiable goals must be established to measure the effectiveness of such programs and policies.

We applaud Montgomery County as the first jurisdiction in the United States to adopt the 2018 International Green Construction Code (IgCC). Both the IgCC and the International Energy Conservation Code (IECC) set performance requirements for service water heating equipment. Significant energy efficiency improvements, regardless of fuel-type, can be achieved with the codes.

Both the 2018 IgCC and 2015 IECC codes list an outdated energy efficiency metric, Energy Factor (EF), which has since been changed to Uniform Energy Factor (UEF). BWC wishes to work with the technical workgroup for buildings to update the performance requirements for service water heating equipment, as well as provide technical guidance for products that we manufacture and are very familiar with. Updating to UEF will maximize the efficiency of equipment and the relevance of building requirements within the county.

BWC appreciates the opportunity to provide feedback on this subject and welcomes a dialogue with Montgomery County on this important issue. Please let me know if you have any questions.

Respectfully Submitted,

Bradford White Corporation

**Built to be the Best™**

725 Talamore Drive • Ambler, PA 19002-1873 • 215-641-9400 • [www.bradfordwhitecorporation.com](http://www.bradfordwhitecorporation.com)



Eric Truskoski  
Senior Director of Government and Regulatory Affairs

Cc: B. Carnevale; M. Taylor; B. Wolfer; B. Ahee

**Built to be the Best™**

---

725 Talamore Drive • Ambler, PA 19002-1873 • 215-641-9400 • [www.bradfordwhitecorporation.com](http://www.bradfordwhitecorporation.com)

